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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/539,032	03/30/2000	Samir Kumar Brahmachari	KNS3.001AUS	7985
20995 7590 06/19/2007 KNOBBE MARTENS OLSON & BEAR LLP 2040 MAIN STREET FOURTEENTH FLOOR IRVINE, CA 92614			EXAMINER MORAN, MARJORIE A	
			ART UNIT 1631	PAPER NUMBER
			NOTIFICATION DATE 06/19/2007	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jcarter@kmob.com  
eOAPilot@kmob.com

<p align="center"><b>Office Action Summary</b></p>	<p><b>Application No.</b></p> <p>09/539,032</p>	<p><b>Applicant(s)</b></p> <p>BRAHMACHARI ET AL.</p>	
	<p><b>Examiner</b></p> <p>Marjorie Moran</p>	<p><b>Art Unit</b></p> <p>1631</p>	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 March 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 and 6-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-9 is/are rejected.
- 7) ☒ Claim(s) 4, 6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/22/07</u> .   | 6) <input type="checkbox"/> Other: _____                          |

***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/22/07 has been entered. Claims 1-4 and 6-9 are pending. All previous rejections are hereby withdrawn in view of the amendment filed 3/22/07.

***Information Disclosure Statement***

The IDS filed 3/22/07 has been considered in full.

***Claim Objections***

Claims 4 and 6 are objected to because of the following informalities: Claim 4 recites that extended conserved peptide sequences comprise "one or more of the following sequences:" but the members of the recited list are not joined by a conjunction. Claim 6 recites that sequences are found within "the sequences of at least one of the following proteins:" but the proteins listed are not joined by a conjunction. The lists recited in each claim therefore represent improper claim construction (i.e. the lists are improper "Markush"-type of groups. It is noted that this objection was set forth in a previous office action and was overcome by amendment. The claims were subsequently amended to remove the term "and" in each claim, without explanation,

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therefore the objection is reinstated. This objection may be overcome by inserting the term --and-- before the last member of each list recited in claims 4 and 6. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-4 and 6-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites a final step of comparing extended conserved peptide sequences (from pathogenic organisms) to host organism protein sequences, and concludes "wherein said conserved peptide sequences which are not present in host proteins are useful as drug targets." It is unclear what limitation of the claimed method is intended by reciting an apparent intended use for conserved peptide sequences. I.e. it is unclear whether applicant intends to limit the method step to identify only those conserved sequences which are known to be "useful as drug targets" or intends an actual step of "using" the conserved peptide sequences as drug targets or actually intends to limit the conserved peptide sequences themselves. As the limitation intended by the final phrase of claim 1 is unclear, the claim is indefinite. It is noted that the originally filed disclosure does not provide support for further method steps of "using" conserved peptide sequences as drug targets nor for a step of identifying only those peptides

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which are known to be drug targets. However, as it is unclear what limitation is actually intended, the claims are rejected herein, with regard to this phrase, only for indefiniteness. This rejection may be overcome by deleting "wherein said conserved peptide sequences which are not present in host proteins are useful as drug targets" at the end of claim 1.

Claim 7 limits step (iii) to comprise steps of selecting organisms names, iteratively comparing peptide sequences of two organisms, and writing sequences to files. However, claim 1 recites a step (iii) comprising matching sorted peptide sequences. It is therefore unclear whether the steps recited in claim 7 are intended to replace the matching of claim 1 or are intended to be additional to the matching of claim 1, therefore claim 7 is indefinite.

Claim 7 recites comparing "peptide sequences" twice in line 3. Parent claim 1 recites generating overlapping peptide sequences in step (i), and recites sorting the generated sequences in step (ii). It is unclear which of these, if either, is intended to be the antecedent basis for the peptide sequences which are compared in claim 7, therefore claim 7 is indefinite.

Claim 8 limits step (iv) to comprise steps of selecting protein sequences, iteratively comparing matched peptide sequences to protein sequences, and labeling a peptide sequence in a file. However, claim 1 recites a step (iv) comprising locating matched peptide sequences in a protein sequences and labeling the matched common sequences. It is therefore unclear whether the steps recited in claim 8 are intended to replace the locating a labeling of claim 1 or are intended to be additional to the locating

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and labeling (i.e. wherein a second labeling step is performed) of claim 1, therefore claim 8 is indefinite.

Claim 8 recites a step of selecting protein sequences, then recites step of comparing matched peptide sequences to "protein sequences" in line 3 and recites "a protein sequence" in line 4. It is unclear whether the "protein sequences" recited in lines 3 and 4 of the claim is intended to be the selected protein sequences recited in line 1, or is intended to be another protein sequence, therefore the claim is indefinite.

Claim 9 limits step (v) to comprise steps of iteratively comparing peptide sequences on matched peptide locations, determining overlapped peptides, and extended peptide sequences. However, claim 1 recites a step (v) comprising joining overlapping common peptide sequences. It is therefore unclear whether the steps recited in claim 8 are intended to replace the joining of claim 1 or are intended to be additional to the joining of claim 1, therefore claim 9 is indefinite.

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-4 and 6-9 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The claims are directed to a method comprising only computational or algorithmic steps. None of the claims recites an actual transformation of matter. Where a method claim does not recite a transformation of matter, the claim may be statutory where it

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recites a concrete, tangible and useful result. The last step of the method is one of comparing conserved peptide sequences to host proteins sequences to determine which sequences are in fact, present in a pathogenic organism but not in a host organism., The claims do not recite communication the result of the comparison to a user in any tangible form (e.g. outputting, displaying, printing), therefore the claims fail to recite a concrete tangible and useful result. As the instant claims fail to recite either a physical transformation of matter or a concrete, tangible and useful result, they are directed to nonstatutory subject matter and are rejected. For a further explanation of statutory subject matter, see MPEP 2106, in particular Section IV.

### ***Conclusion***

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marjorie Moran whose telephone number is 571-272-0720. The examiner can normally be reached on M-F 6:30 am- 2 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ram Shukla can be reached on 571-272-0735. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Marjorie Moran  
Primary Examiner  
Art Unit 1631

*Marjorie A. Moran*  
6/9/07